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CLAIMS

[c1]   1.   A switch for supporting wireless communication, comprising:

a first element communicating with a code division multiple access (CDMA) radio access network (RAN) using CDMA protocol; and

a second element communicating with a GSM core infrastructure using GSM protocol, the first and second elements communicating with each other, whereby use of the CDMA RAN with the GSM core infrastructure is facilitated.

[c2]   2.   The switch of Claim 1, wherein the first element is a packet data serving node (PDSN) element.

[c3]   3.   The switch of Claim 1, wherein the second element is a serving GPRS service node (SGSN) element.

[c4]   4.   The switch of Claim 3, wherein the SGSN element communicates with a gateway GPRS service node (GGSN).

[c5]   5.   The switch of Claim 2, wherein the PDSN element communicates with a CDMA base station controller (BSC).

[c6]   6.   The switch of Claim 1, wherein the switch transfers computer data between the CDMA RAN and GSM core infrastructure.

[c7]   7.   The switch of Claim 1, wherein the switch terminates point-to-point protocol (PPP) framing from the CDMA RAN and sends Internet Protocol (IP) to the GSM core infrastructure in response to selection of IP by a user of a CDMA mobile station communicating with the CDMA RAN.

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[c8]   8.   A method for facilitating the use of a CDMA RAN with a GSM core infrastructure, comprising at least one of:

terminating point-to-point protocol (PPP) framing from the CDMA RAN and sending Internet Protocol (IP) to the GSM core infrastructure in response to selection of IP by a user of a CDMA mobile station communicating with the CDMA RAN; and

initiating packet data protocol (PDP) context activation including specifying at least one access point name from the CDMA mobile station.

[c9]   9.   The method of Claim 8, further comprising initiating PDP context activation including specifying at least one access point name from a GSM home location registry (HLR).

[c10]   10.   The method of Claim 8, comprising undertaking the terminating and initiating acts using a switch having a packet data serving node (PDSN) element communicating with the CDMA RAN using CDMA protocol and a serving GPRS service node (SGSN) element communicating with the GSM core infrastructure using GSM protocol, the elements of the switch communicating with each other.

[c11]   11.   A method for facilitating the use of a CDMA RAN with a GSM core infrastructure, comprising at least one of:

terminating point-to-point protocol (PPP) framing from the CDMA RAN and sending Internet Protocol (IP) to the GSM core infrastructure in response to selection of IP by a user of a CDMA mobile station communicating with the CDMA RAN; and

initiating packet data protocol (PDP) context activation including specifying at least one access point name from a GSM home location registry (HLR).

[c12]   12.   The method of Claim 11, comprising initiating PDP context activation including specifying at least one access point name from a CDMA mobile station using existing CDMA messages.

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[c13]   13.   The method of Claim 11, comprising undertaking the terminating and initiating acts using a switch having a packet data serving node (PDSN) element communicating with the CDMA RAN using CDMA protocol and a serving GPRS service node (SGSN) element communicating with the GSM core infrastructure using GSM protocol, the elements of the switch communicating with each other.

[c14]   14.   A wireless data communication system, comprising:

a CDMA RAN;

a GSM core infrastructure; and

at least one switch interconnecting the CDMA RAN and GSM core infrastructure, the switch receiving and transmitting computer data using CDMA protocol to the CDMA RAN, the switch receiving and transmitting computer data using GSM protocol to the GSM core infrastructure.

[c15]   15.   The system of Claim 14, wherein the switch includes a first element communicating with the CDMA RAN and a second element communicating with the GSM core infrastructure.

[c16]   16.   The system of Claim 15, wherein the first element is a packet data serving node (PDSN) element.

[c17]   17.   The system of Claim 15, wherein the second element is a serving GPRS service node (SGSN) element.

[c18]   18.   The system of Claim 17, further comprising at least one gateway GPRS service node (GGSN) communicating with the SGSN element.

[c19]   19.   The system of Claim 16, further comprising at least one CDMA base station controller (BSC) communicating with the PDSN element.

[c20]   20.   The system of Claim 14, wherein the switch terminates point-to-point protocol (PPP)

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framing from the CDMA RAN and sends Internet Protocol (IP) to the GSM core infrastructure in response to selection of IP by a user of a CDMA mobile station communicating with the CDMA RAN.

[c21]   21.   The method of Claim 8, further comprising encapsulating IP from the GSM core infrastructure in point-to-point protocol (PPP) framing and transmitting the PPP to a CDMA mobile station in response to selection of IP by a user of the CDMA mobile station.

[c22]   22.   The method of Claim 11, further comprising encapsulating IP from the GSM core infrastructure in point-to-point protocol (PPP) framing and transmitting the PPP to a CDMA mobile station in response to selection of IP by a user of the CDMA mobile station.

[c23]   23.   The method of Claim 8, comprising both the terminating and initiating acts.

[c24]   24.   The method of Claim 11, comprising both the terminating and initiating acts.

[c25]   25.   The method of Claim 8, wherein PDP context activation is initiated without changing a CDMA standard used by the mobile station.

[c26]   26.   A method for facilitating the use of a CDMA RAN with a GSM core infrastructure, comprising selecting packet data protocol (PDP) context as IP or PPP without changing a CDMA standard.

[c27]   27.   The method of Claim 26, wherein the standard is cdma2000 1x.

[c28]   28.   The method of Claim 26, wherein the standard is cdma2000 3x.

[c29]   29.   The method of Claim 26, wherein the standard is CDMA HLR.